

Listing of Claims

1. (Currently Amended) A method of driving a plasma display panel, comprising the steps of:

selecting an operation mode on a basis of a motion extent of a data; and

controlling ~~at least one of~~ a sub-field arrangement arranged within one frame interval ~~and the number of sustaining pulses~~ differently in response to said selected operation mode, said frame interval including a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields, wherein said controlling includes:

setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields in a first operation mode, and

setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields in a second operation mode.

2. (Currently Amended) The method as claimed in claim 1, further comprising the step of: receiving at least one of a signal from a remote controller for remotely controlling the plasma display panel, a cable signal connected to a different media and a signal from a mode selection switch provided separately at the plasma display panel.

3. (Currently Amended) The method as claimed in claim 2 [[1]], wherein ~~said step of~~ selecting the operation mode includes: determining said operation mode in response to said received signal.

4. (Currently Amended) The method as claimed in claim 1, wherein ~~said step of~~ selecting the operation mode includes:

comparing said data between frames to calculate a variation amount, and then

comparing said variation amount with a desired reference value, thereby selecting said operation mode.

5. (Currently Amended) The method as claimed in claim 1, wherein ~~said sub-field arrangement includes: at least one~~ the selective writing sub-fields are for selecting on-cells in an address period; ~~and at least one~~ and the selective erasing sub-fields are for selecting off-cells in the address period.

6. (Currently Amended) The method as claimed in claim 1 ~~[[5]]~~, wherein ~~said step of~~ differently said controlling ~~at least one of said sub-field arrangement and the number of~~ sustaining pulses includes:

if said first operation mode is an AV mode in which a motion extent of said data is large, then setting ~~allowing~~ the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields.

7. (Currently Amended) The method as claimed in claim 1 ~~[[5]]~~, wherein ~~said step of~~ differently said controlling ~~at least one of said sub-field arrangement and the number of~~ sustaining pulses includes:

if said second operation mode is a PC mode in which a motion extent of said data is small, then setting allowing the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields.

8. (Currently Amended) The method as claimed in claim 1, wherein ~~said step of~~ differently controlling at least one of said sub-field arrangement and the number of sustaining pulses includes:

if said first operation mode is an AV mode in which a motion extent of said data is large, then setting the number of selective erasing sub-fields to be greater than the number of selective writing sub-fields to reduce selecting a first sub-field arrangement in which sub-fields are arranged to have a small contour noise at a moving picture relative to the second operation mode, and

if said second operation mode is a PC mode in which a motion extent of said data is small, then setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields to increase a selecting a second sub-field arrangement in which sub-fields are arranged to have a wider gray level expression range relative to the first operation mode than the first sub-field arrangement.

9. (Currently Amended) A The method as claimed in claim 4 of driving a plasma display panel, comprising:

selecting an operation mode on a basis of a motion extent of a data; and

controlling a number of sustaining pulses within a frame interval differently in response to said selected operation mode, wherein said step of differently controlling at least one of said sub-field arrangement and the number of sustaining pulses includes:

if said operation mode is selected to be a PC mode in which a motion extent of said data is small relative to an AV mode, then controlling the number of sustaining pulses within the frame interval is reduced to be smaller than a the number of sustaining pulses set in correspondence with the [[an]] AV mode in which a motion extent of said data is large relative to the PC mode, wherein the reduction in the number of sustaining pulses in PC mode is set to reduce average brightness to within a predetermined range relative to average brightness achieved during AV mode.

10. (Currently Amended) ~~The method as claimed in claim 2 [[1]], wherein said step of differently controlling at least one of said sub-field arrangement and the number of sustaining pulses includes: if said operation mode is a PC mode in which a motion extent of said data is small, then reducing wherein, in PC mode, the number of sustaining pulses is reduced such that said data is can be displayed at an average brightness falling in the range of 50% through 80% with respect to an average brightness of said data displayed on the plasma display panel in [[an]]~~

AV mode in which a motion extent of said data is large.

11. (Currently Amended) A driving apparatus for a plasma display panel, comprising:
a mode selector for selecting an operation mode on a basis of a motion extent of a data; and
a controller for controlling ~~at least one of~~ a sub-field arrangement arranged within one frame interval ~~and the number of sustaining pulses~~ differently in response to said selected operation mode, said frame interval including a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields, said controller:
setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields when the mode selector selects a first operation mode, and
setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields when the mode selector selects a second operation mode.

12. (Original) The driving apparatus as claimed in claim 11, wherein said mode selector receives at least one of a signal from a remote controller for remotely controlling the plasma display panel, a cable signal connected to a different media and a signal from a mode selection switch provided separately at the plasma display panel, and determines said operation mode in response to said received signal.

13. (Original) The driving apparatus as claimed in claim 11, wherein said mode selector compares said data between frames to calculate a variation amount and then compares said variation amount with a desired reference value, thereby selecting said operation mode.

14. (Currently Amended) The driving apparatus as claimed in claim 11, wherein ~~said controller arranges at least one~~ the selective writing sub-fields are for selecting on-cells in an address period and ~~at least one~~ the selective erasing sub-fields are for selecting off-cells in the address period within said one frame interval; and[[,]]

if said first operation mode selected by the mode selector is an AV mode in which a motion extent of said data is large, the controller sets ~~allows~~ the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields.

15. (Currently Amended) The driving apparatus as claimed in claim 11, wherein ~~said controller arranges at least one~~ the selective writing sub-fields are for selecting on-cells in an address period and ~~at least one~~ the selective erasing sub-fields are for selecting off-cells in the address period within said one frame interval; and[[,]]

if said second operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small, the controller sets ~~allows~~ the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields.

16. (Original) The driving apparatus as claimed in claim 11, wherein[[,]]:

if said first operation mode selected by the mode selector is an AV mode in which a motion extent of said data is large, then said controller sets the number of selective erasing sub-fields to be greater than the number of selective writing sub-fields to reduce maps said data onto a first sub-field arrangement in which sub-fields are arranged to have a small contour noise at a moving picture relative to the second operation mode; ~~whereas,~~

if said second operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small, then said controller sets the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields to increase a maps said data onto a second sub-field arrangement in which sub-fields are arranged to have a wider gray level expression range relative to the first operation mode than the first sub-field arrangement.

17. (Currently Amended) A The driving apparatus for a plasma display panel as ~~claimed in claim 11,~~ comprising:

a mode selector to select an operation mode based on motion extent of data; and

a controller to control a number of sustaining pulses within a frame interval differently in response to said selected operation mode, wherein[[,]] if said operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small relative to an AV mode, then said controller controls the number of sustaining pulses to be

smaller than a [[the]] number of sustaining pulses set in correspondence with the [[an]] AV mode in which a motion extent of said data is large relative to the PC mode, wherein the reduction in the number of sustaining pulses in PC mode is set to reduce average brightness to within a predetermined range relative to average brightness achieved during AV mode.

18. (Currently Amended) The driving apparatus as claimed in claim 17, ~~wherein, if said operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small, then said controller reduces~~ wherein, in PC mode, the number of sustaining pulses is reduced such that said data ~~is~~ can be displayed at an average brightness falling in the range of 50% through 80% with respect to an average brightness of said data displayed on the plasma display panel in [[an]] AV mode in which a motion extent of said data is large.

19. (New) The method as claimed in claim 1, wherein setting the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields corresponds to a first number of gray levels that are capable of being generated, and wherein setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields corresponds to a second number of gray levels that are capable of being generated, the second number of gray levels being greater than the first number of gray levels.

20. (New) The method as claimed in claim 1, wherein the selective writing sub-fields select on cells using binary coding and the selective erasing sub-fields select off cells using linear coding, and wherein a number of gray levels capable of being generated by the selective erasing sub-fields using linear coding is less than a number of gray levels capable of being generated by the selective writing sub-fields.

21. (New) The method as claimed in claim 1, wherein a last one of the selective erasing subfields does not have a reset period and other ones of the selective writing sub-fields have a reset period.

22. (New) The method as claimed in claim 1, wherein a last one of the selective writing sub-fields does not have an erasure period and other ones of the selective writing sub-fields has an erasure period.